APPENDIX N
INFECTION CONTROL MEASURES

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Sanitation, Disinfection, and Maintenance

Routine Cleaning, Sanitizing, and Disinfecting of Contaminated Surfaces

These techniques can help reduce the spread of germs in child care and school environments. The definitions of these terms and techniques for their use follow:

- **Routine cleaning:** using detergents or abrasive cleaners and rinsing with water to remove surface soil.
- **Sanitizing:** removing filth or soil and small amounts of certain germs. For a surface to be considered sanitary, the surface must be cleaned first and then an additional sanitizer solution must be applied to reduce the number of germs to such a level that disease transmission by that surface is unlikely. This procedure is less rigorous than disinfecting and is applicable to a wide variety of routine housekeeping procedures.
  - ~ Many different types of sanitizing solutions are available.
  - ~ Follow the instructions on the manufacturer's label for correct use.
  - ~ Products that are registered with the US Environmental Protection Agency (EPA) as *detergent-disinfectant* or *hospital-grade* germicides may be used for sanitizing.
  - ~ Avoid products that are labeled as toxic for children.
  - ~ Be cautious of industrial products advertised as "having germicidal action" or "killing germs." They may not have the same effectiveness as bleach and water or EPA-approved hospital-grade germicides.
  - ~ Consult with your local health department or regulatory licensing authority for any product other than bleach.
    - ◆ Surface sanitizing method.
      - ◦ Household bleach is inexpensive, relatively safe, and easy to use and can be mixed as follows:
        - – Mix ¼ cup of household bleach to 1 gallon of tap water (or 1 tablespoon of household bleach to 1 quart of water) for a 1:64 dilution. Because chlorine evaporates from bleach and is weakened by sunlight and heat, this minimal dilution may become too diluted to be effective if not made fresh daily from the stock bottle of household bleach. Freshly purchased stock supplies should be used within a few months so they, too, do not become too weak to be effective when diluted.
        - – To sanitize with the freshly made 1:64 dilution of bleach, spray the diluted solution on the surface until glossy. Leave the bleach solution on the surface for at least 2 minutes before wiping it off with a clean paper towel, or allow it to air-dry.
    - ◆ Dipping methods for sanitizing dishes and toys also are useful.
      - ◦ Follow the manufacturer's instructions on the containers for products other than bleach for this method.
      - ◦ Household bleach
        - – Mix 1.5 teaspoons of household bleach per gallon of water (100 parts per million chlorine) that is not less than 75°F.
        - – Immerse the object to be sanitized for at least 2 minutes.
        - – Allow the object to air-dry.
      - ◦ Hot water immersion
        - – Completely immerse in hot water at 170°F for not less than 30 seconds.
        - – Air-dry.
- **Disinfecting:** eliminating virtually all germs from surfaces through the use of chemicals registered with the US EPA as *disinfectants* or physical agents (eg, heat).

Prevention of Disease Transmission

Baseline routine frequency of cleaning and sanitation can be found in the chart on page 14. Frequency of cleaning and sanitation should be increased when there are

- Outbreaks of illness
- Known contamination
- Visible soil, blood, or other body fluids
- Recommendations by the health department to control certain infectious diseases

Fecal bacteria in the environment have been shown to increase during outbreaks of diarrheal illnesses. Health officials may recommend a more frequent cleaning schedule in certain areas depending on the nature of the problem.

Common Sanitation Issues

Environmental Surfaces and Equipment

Because children will touch any reachable surface (including floors), all surfaces may be contaminated and can spread infectious disease agents. Therefore, all surfaces must be properly sanitized.

- Respiratory tract secretions may contaminate surfaces because they may contain viruses that remain infectious for varying periods of time, making it possible to acquire an infection by touching these surfaces.
- Walls, ceilings, floors, furnishings, equipment, and other surfaces should be maintained in good repair, free from visible soil, and in a clean condition.
- All surfaces, furnishings, and equipment that are not in good repair or have been contaminated by body fluids should not be used until repaired, cleaned, and, if need be, sanitized effectively.

- Tables used for play often are the same as those used for meals and snacks; therefore, cleaning/sanitizing these tables may reduce the risk of transmitting disease.
- Carpets, porous fabrics, other surfaces that trap soil, and potentially contaminated materials are not to be used in toilet rooms, diaper changing areas, and food preparation areas.
- Use caution when shampooing rugs used by children who are crawling. Cleaning with potentially hazardous chemicals should be scheduled to minimize exposure to children.

One way to measure compliance with the standard for cleanliness is to wipe a surface with a clean mop or rag and then insert the mop or rag in cold rinse water. If the surface is clean, no residue will appear in the rinse water.

Cleaning Equipment

- Only utility gloves/equipment designated for cleaning and sanitizing toilets should be used. After each use, utility gloves are to be washed with soapy water and dried.
  - ~ Disposable gloves commonly are made of latex or vinyl. If individuals sensitive to latex are present in the facility, only vinyl disposable gloves should be used.
- Disposable towels are preferred for cleaning and should be placed in a plastic-lined container until removed to outside garbage.
- After each day of use, cloth rags are to be placed in a closed, foot-operated receptacle until laundered.
- Reusable rags should be cleaned and sanitized before and after each day of use.
- Sponges are not recommended because they retain organic material that promotes bacterial growth.
- Mops should be assumed to be contaminated because they are used to remove contamination from floors and other soiled surfaces. Be sure they are cleaned and sanitized before and after a day of use.
  - ~ Bleach solution used for sanitizing the child care and school environment (see "Routine Cleaning, Sanitizing, and Disinfecting of Contaminated Surfaces" on page 15) can be used for sanitizing mops and rags. Detachable mop heads and reusable rags may be cleaned in a washing machine without other types of articles in the same load and dried in a mechanical dryer or hung to dry.

Waste Receptacles

Waste receptacles in toilet rooms should be kept clean, lined with plastic bags, in good repair, and emptied daily. Those that receive materials that are contaminated with body fluids should be of the hands-free type, such as a foot-operated receptacle. All other waste receptacles should be kept clean and emptied daily. This practice prevents the spread of disease

Shoes

Infants put their hands in their mouths after touching play surfaces; therefore

- Shoes worn either outside of the infant play area or on surfaces contaminated with disease-causing agents may transfer infectious material to the infant play area.
- Shoes worn in toilet or diaper changing areas, play areas of other groups of children, and outdoors should not be allowed in the infant play area.
- Shoes/slippers worn only in the infant play area are allowed.
- As long as their feet are clean and have no sores or warts, children and adults may be barefoot in the play area.

- All toys can spread disease when children mouth or touch them after putting their hands in their mouths during play or eating or after toileting with inadequate hand washing.
- Toys that cannot be washed and sanitized should not be used.
- Mouthed toys or toys contaminated by body secretions or excretions should be removed from the play area until they are washed with water and detergent, rinsed, sanitized, and air-dried.
- Machine-washable cloth toys should be used only by one child until these toys are laundered.
- Indoor toys should not be shared between groups of infants or toddlers unless they are washed/sanitized before being moved from one group to another.
- Small, hard-surfaced toys can be cleaned in a dish pan labeled "soiled toys" containing soapy water to remove soil or a dry container used to bring the soiled toys to a toy cleaning area later in the day. A dishwasher that can sanitize dishes can be used to clean and sanitize hard-surfaced toys.
- Have more than one set of toys on hand so that one set can be used while the other is cleaned.

Mouthed Objects

Thermometers, pacifiers, teething toys, and similar objects should be cleaned and reusable parts should be sanitized between uses. Pacifiers should not be shared. Pacifiers should be cleaned and sanitized daily.

Bedding, Personal Clothing, and Cribs

Sleep equipment should be used only by one child, cleaned and sanitized before use by another child, and stored separately from others.

- Cribs and crib mattresses shall have a nonporous, easy-to-wipe surface.
- Bedding (eg, sheets, pillows, blankets, sleeping bags) should be washable.

- Lice infestation, scabies, and ringworm are among the most common contagious diseases in child care and school settings. Diseases can spread if bedding materials, jackets with hoods, and hats used by various children are stored so that they touch each other.

Potty Chairs and Toilets

- Potty chair use is not recommended and should be discouraged.
- If potty chairs are used, they should be
  - ~ Made with a surface that is easily cleaned and sanitized.
  - ~ Used only in a bathroom area.
  - ~ Used over a surface that won't be damaged by moisture.
  - ~ Out of reach of toilets or other potty chairs.
  - ~ Emptied into a toilet, then cleaned in a sink that is used only for cleaning and sanitizing potty chairs.
- Toilets should be kept visibly clean and separate from the children's activity area.

Staff Training

Provide training for staff responsible for cleaning, including

- How to handle, mix, and store cleaning solutions (See "Sanitation, Disinfection, and Maintenance" on page 15.)
- Proper use of protective barriers (eg, gloves)
- Proper handling and disposal of contaminated materials
- Information required by the US Occupational Safety and Health Administration about the use of any chemical agents

Even if custodial services are provided under a contract with an outside service organization, be sure that an assigned staff member supervises routine cleaning of the facility according to the facility's schedule.

Hand Washing Steps

Because many infected people carry communicable diseases without having symptoms and are contagious before they experience symptoms, caregivers/teachers need to protect themselves and the children they serve by carrying out hygienic procedures on a routine basis.

Why Is Hand Washing Important?

Hand washing is the most effective means of reducing germs and infections in group care settings. Studies have shown that unwashed or improperly washed hands are primary carriers of infections. Lack of hand washing and poor hand washing techniques have contributed to many outbreaks of diarrhea among children and staff in group care settings. Conversely, adherence to good hand washing techniques has consistently demonstrated a reduction in disease transmission in child care and school settings. While working with children, caregivers/teachers should not wear elaborate jewelry or long or artificial nails because these interfere with effective hand washing. Using hand lotion after hand washing to prevent chapping and cracking of skin also is important.

When to Wash Hands

To prevent the spread of infection, signs should be posted at each sink indicating when and how staff, volunteers, and children should wash their hands.

Hand washing should occur

- When arriving for the day or when moving from one group of children to another
- Before and after
  - ~ Eating, handling food, or feeding a child; especially important for children who eat with their hands to decrease the amount of saliva (which may contain organisms) on their hands
  - ~ Administering a medication
  - ~ Playing with water that is used by more than one person
- After
  - ~ Diapering and toileting
  - ~ Handling body fluids (eg, mucus, blood, vomit)
  - ~ Wiping noses, mouths, and sores
  - ~ Handling uncooked food, especially raw meat and poultry
  - ~ Handling pets and other animals
  - ~ Playing in sandboxes (to prevent the ingestion of zoonotic parasites that could be present in contaminated sand and soil)
  - ~ Cleaning
  - ~ Handling garbage
- When leaving for the day